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=> s embryonic stem cell
L1 8688 EMBRYONIC STEM CELL

=> s neuron?
L2 731034 NEURON?

=> s l1 and l2
L3 733 L1 AND L2

=> s serum free or (without(3a)serum) or (minus(3a)serum)
L4 56250 SERUM FREE OR (WITHOUT(3A) SERUM) OR (MINUS(3A) SERUM)

=> s l3 and l4
L5 13 L3 AND L4

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6 9 DUP REM L5 (4 DUPLICATES REMOVED)

=> d ti so 1-9

L6 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Embryonic stem cells and neural progenitor cells derived therefrom
SO PCT Int. Appl., 125 pp.
CODEN: PIXXD2

L6 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Regulation of apoptosis during neuronal differentiation by ceramide and b-series complex gangliosides
SO Journal of Biological Chemistry (2001), 276(48), 44396-44404
CODEN: JBCHA3; ISSN: 0021-9258

L6 ANSWER 3 OF 9 MEDLINE
TI Direct neural fate specification from embryonic stem cells: a primitive mammalian neural stem cell stage acquired through a default mechanism.
SO NEURON, (2001 Apr) 30 (1) 65-78.
Journal code: 8809320. ISSN: 0896-6273.

L6 ANSWER 4 OF 9 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Induction of midbrain dopaminergic neurons from ES cells by stromal cell-derived inducing activity.
SO Neuron, (October, 2000) Vol. 28, No. 1, pp. 31-40. print.
ISSN: 0896-6273.

L6 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2002 ACS
TI Method for the preparation of neural precursor cells and their application in transplantation for the therapy of neural defects
SO Ger., 26 pp.
CODEN: GWXXAW

L6 ANSWER 6 OF 9 MEDLINE DUPLICATE 1
TI BMP-4 inhibits neural differentiation of murine embryonic stem cells.
SO JOURNAL OF NEUROBIOLOGY, (1999 Sep 5) 40 (3) 271-87.

Journal code: 0213640. ISSN: 0022-3034.

L6 ANSWER 7 OF 9 MEDLINE DUPLICATE 2
TI Embryonic stem cells as a model for studying
regulation of cellular differentiation.
SO THERIOGENOLOGY, (1998 Jan 1) 49 (1) 145-51.
Journal code: 0421510. ISSN: 0093-691X.

L6 ANSWER 8 OF 9 BIOSIS COPYRIGHT 2002 BIOLOGICAL
ABSTRACTS INC.
TI Neuronal induction of embryonic stem
cells in serum-free medium.
SO Society for Neuroscience Abstracts, (1996) Vol. 22, No. 1-3, pp.
521.
Meeting Info.: 26th Annual Meeting of the Society for Neuroscience
Washington, D.C., USA November 16-21, 1996
ISSN: 0190-5295.

L6 ANSWER 9 OF 9 BIOSIS COPYRIGHT 2002 BIOLOGICAL
ABSTRACTS INC. DUPLICATE 3
TI PARTIAL EXPRESSION OF MONOAMINERGIC
SEROTONINERGIC PROPERTIES BY THE
MULTIPOTENT HYPOTHALAMIC CELL LINE F-7 AN
EXAMPLE OF LEARNING AT THE
CELLULAR LEVEL.
SO NEUROCHEM INT, (1986) 9 (1), 43-54.
CODEN: NEUIDS. ISSN: 0197-0186.

=> d ibib ab 1,5,6

L6 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:693474 CAPLUS
DOCUMENT NUMBER: 135:238973
TITLE: Embryonic stem cells and
neural progenitor cells derived therefrom
INVENTOR(S): Pera, Martin Frederick; Ben-Hur, Tamir
PATENT ASSIGNEE(S): Monash University, Australia; National
University of
Singapore; Hadasit Medical Research Services and
Development Company Limited; Reubinoff
SOURCE: PCT Int. Appl., 125 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001068815	A1	20010920	WO 2001-AU278	
20010314				
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
PRIORITY APPLN. INFO.:	AU 2000-6211	A 20000314		
	AU 2000-1279	A 20001106		
	AU 2001-2920	A 20010206		
AB	The present invention relates to undifferentiated human embryonic stem cells, methods of cultivation and propagation and			

prodn. of differentiated cells. In particular it relates to the prodn. of human ES cells capable of yielding somatic differentiated cells in vitro, as well as committed progenitor cells such as neural progenitor cells capable of giving rise to mature somatic cells including neural cells and/or glial cells and uses thereof. In one aspect of the present invention, there is provided an enriched prepn. of undifferentiated human embryonic stem cells capable of proliferation in vitro and differentiation to neural progenitor cells, neuron cells and/or glial cells. This invention provides a method that generates an in vitro and in vivo model of controlled differentiation of ES cells towards the neural lineage. The model, and the cells that are generated along the pathway of neural differentiation may be used for the study of the cellular and mol. biol. of human neural development, for the discovery of genes, growth factors, and differentiation factors that play a role in neural differentiation and regeneration, for drug discovery and for the development of screening assays for teratogenic, toxic and neuroprotective effects.
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:286235 CAPLUS
DOCUMENT NUMBER: 130:278952
TITLE: Method for the preparation of neural precursor cells and their application in transplantation for the therapy of neural defects
INVENTOR(S): Bruestle, Oliver
PATENT ASSIGNEE(S): Germany
SOURCE: Ger., 26 pp.
CODEN: GWXXAW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19756864	C1	19990429	DE 1997-19756864	19971219
CA 2315538	AA	19990701	CA 1998-2315538	19981218
WO 9932606	A2	19990701	WO 1998-DE3817	19981218
WO 9932606	A3	19990826		
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 9925106	A1	19990712	AU 1999-25106	19981218
EP 1040185	A2	20001004	EP 1998-966817	19981218
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
JP 2001526884	T2	20011225	JP 2000-525525	19981218
PRIORITY APPLN. INFO.:			DE 1997-19756864	A 19971219

WO 1998-DE3817 W 19981218

AB The invention concerns the prodn. of purified **neuronal** and/or glial precursor cells from **embryonic stem** cells that contain max. 1.5% primitive embryonic stem and non-neural cells. The procedure is performed in series of steps: cultivation of **embryonic stem** cells to form embryoid bodies; cultivation of the embryoid bodies to form neural precursor cells; proliferation of neural cells in a **serum** free, growth factor contg. culture medium. **Neuronal** precursor cells are passaged to an other culture media with growth factor and either the **neuronal** or glial precursor cells are isolated and purified; or the cells are grown to spheroids with **neuronal** and glial differentiation potential. This is followed by the proliferation of the spheroid cells to form a confluent cell culture of glial precursor cells; and isolation of the purified glial precursor cells from the touch-down culture. Mammalian cells are used that are astrocytes, oligodendrocytes and **neuronal** cells; they can be genetically modified. The purified precursor cells are suspended in an injection soln.; they can be used for the therapy of nerve diseases; for the reconstruction of **neurons** or remyelination of demyelinated **neurons**. The precursor cells can be used for gene transfer and for the prodn. of polypeptides.

L6 ANSWER 6 OF 9 MEDLINE DUPLICATE 1
 ACCESSION NUMBER: 1999370092 MEDLINE
 DOCUMENT NUMBER: 99370092 PubMed ID: 10440729
 TITLE: BMP-4 inhibits neural differentiation of murine **embryonic stem** cells.
 AUTHOR: Finley M F; Devata S; Huettner J E
 CORPORATE SOURCE: Department of Cell Biology and Physiology and Program in Neuroscience, Washington University Medical School, 660 South Euclid Avenue, St. Louis, Missouri 63110, USA.
 CONTRACT NUMBER: NS30888 (NINDS)
 SOURCE: JOURNAL OF NEUROBIOLOGY, (1999 Sep 5) 40 (3) 271-87.
 Journal code: 0213640. ISSN: 0022-3034.
 PUB. COUNTRY: United States
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 LANGUAGE: English
 FILE SEGMENT: Priority Journals
 ENTRY MONTH: 199912
 ENTRY DATE: Entered STN: 20000113
 Last Updated on STN: 20000113
 Entered Medline: 19991220

AB Members of the transforming growth factor-beta superfamily, including bone morphogenetic protein 4 (BMP-4), have been implicated as regulators of **neuronal** and glial differentiation. To test for a possible role of BMP-4 in early mammalian neural specification, we examined its effect on neurogenesis in aggregate cultures of mouse embryonic stem (ES) cells. Compared to control aggregates, in which up to 20% of the cells acquired immunoreactivity for the **neuron**-specific antibody TuJ1, aggregates maintained for 8 days in **serum**-free medium containing BMP-4 generated 5- to 10-fold fewer **neurons**. The action of BMP-4 was dose dependent and restricted to the fifth through eighth day in suspension. In addition to the reduction in **neurons**, we observed that ES cell cultures exposed to BMP-4 contained fewer cells that were immunoreactive for glial fibrillary acidic protein or the HNK-1 neural antigen. Furthermore, under phase contrast, cultures prepared from BMP-4-treated aggregates contained a significant proportion of nonneuronal cells with a characteristic flat, elongated morphology. These cells were immunoreactive for antibodies to the intermediate filament protein

vimentin; they were rare or absent in control cultures. Treatment with BMP-4 enhanced the expression of the early mesodermal genes brachyury and **tbx6** but had relatively little effect on total cell number or cell death. Coapplication of the BMP-4 antagonist noggin counteracted the effect of exogenous BMP-4, but noggin alone had no effect on neuralization in either the absence or presence of retinoids. Collectively, our results suggest that BMP-4 can overcome the neuralizing action of retinoic acid to enhance mesodermal differentiation of murine ES cells.
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(FILE 'HOME' ENTERED AT 13:31:41 ON 12 AUG 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 13:31:52 ON 12 AUG 2002
 L1 8688 S EMBRYONIC STEM CELL
 L2 731034 S NEURON?
 L3 733 S L1 AND L2
 L4 56250 S SERUM FREE OR (WITHOUT(3A)SERUM) OR (MINUS(3A)SERUM)
 L5 13 S L3 AND L4
 L6 9 DUP REM L5 (4 DUPLICATES REMOVED)

=> s defin? media or defin? medium

L7 14822 DEFIN? MEDIA OR DEFIN? MEDIUM

=> s l3 and l7

L8 12 L3 AND L7

=> dup rem l8

PROCESSING COMPLETED FOR L8

L9 6 DUP REM L8 (6 DUPLICATES REMOVED)

=> d ti so 1-6

L9 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2002 ACS
 TI The use of chemically **defined media** for the analyses of early development in ES cells and mouse embryos
 SO Methods in Molecular Biology (Totowa, NJ, United States) (2002), 185(Embryonic Stem Cells), 17-26
 CODEN: MMBIED; ISSN: 1064-3745

L9 ANSWER 2 OF 6 MEDLINE DUPLICATE 1
 TI Nestin-specific green fluorescent protein expression in **embryonic stem** cell-derived neural precursor cells used for transplantation.
 SO STEM CELLS, (2001) 19 (5) 419-24.
 Journal code: 9304532. ISSN: 1066-5099.

L9 ANSWER 3 OF 6 MEDLINE DUPLICATE 2
 TI Enrichment of **neurons** and neural precursors from human **embryonic stem** cells.
 SO EXPERIMENTAL NEUROLOGY, (2001 Dec) 172 (2) 383-97.
 Journal code: 0370712. ISSN: 0014-4886.

L9 ANSWER 4 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 TI Derivation of functional **neurons** from primate pluripotent parthenogenetic stem cells.
 SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 345. print.
 Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San Diego, California, USA November 10-15, 2001
 ISSN: 0190-5295.

L9 ANSWER 5 OF 6 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

TI Positional specification of in vitro generated, ESEs cell-derived neural progenitors.
 SO Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp. Abstract
 No.-23.2. print.
 Meeting Info.: 30th Annual Meeting of the Society of Neuroscience New Orleans, LA, USA November 04-09, 2000 Society for Neuroscience
 ISSN: 0190-5295.

L9 ANSWER 6 OF 6 MEDLINE DUPLICATE 3
 TI Lineage-restricted neural precursors can be isolated from both the mouse neural tube and cultured ES cells.
 SO DEVELOPMENTAL BIOLOGY, (1999 Oct 1) 214 (1) 113-27.
 Journal code: 0372762. ISSN: 0012-1606.

=> d his

(FILE 'HOME' ENTERED AT 13:31:41 ON 12 AUG 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 13:31:52 ON 12 AUG 2002

L1 8688 S EMBRYONIC STEM CELL
 L2 731034 S NEURON?
 L3 733 S L1 AND L2
 L4 56250 S SERUM FREE OR (WITHOUT(3A)SERUM) OR (MINUS(3A)SERUM)
 L5 13 S L3 AND L4
 L6 9 DUP REM L5 (4 DUPLICATES REMOVED)
 L7 14822 S DEFIN? MEDIA OR DEFIN? MEDIUM
 L8 12 S L3 AND L7
 L9 6 DUP REM L8 (6 DUPLICATES REMOVED)

=> s emx2 or hoxb1 or leukemia inhibitory factor or nestin
 L10 7583 EMX2 OR HOXB1 OR LEUKEMIA INHIBITORY FACTOR OR NESTIN

=> s l3 and l10
 L11 76 L3 AND L10

=> dup rem l11
 PROCESSING COMPLETED FOR L11
 L12 45 DUP REM L11 (31 DUPLICATES REMOVED)

=> d ti so 1-45

L12 ANSWER 1 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 TI Quantitation and functional characterization of neural cells derived from ES cells using nestin enhancer-mediated targeting in vitro.
 SO Journal of Cell Science, (April 1, 2002) Vol. 115, No. 7, pp. 1471-1485.
<http://jcs.biologists.org/>. print.
 ISSN: 0021-9533.

L12 ANSWER 2 OF 45 MEDLINE DUPLICATE 1
 TI Early neuronal and glial determination from mouse E10.5 telencephalon embryonic stem cells: an in vitro study.
 SO NEUROREPORT, (2002 Jul 2) 13 (9) 1209-14.
 Journal code: 9100935. ISSN: 0959-4965.

L12 ANSWER 3 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
 TI Noggin and chordin have distinct activities in promoting lineage commitment of mouse embryonic stem (ES) cells.
 SO Developmental Biology, (May 1, 2002) Vol. 245, No. 1, pp. 83-94.
<http://www.academicpress.com/db>. print.
 ISSN: 0012-1606.

L12 ANSWER 4 OF 45 CAPLUS COPYRIGHT 2002 ACS
 TI Neural progenitor cell populations obtained from culturing stem cells in cocktail of growth conditions
 SO PCT Int. Appl., 39 pp.
 CODEN: PIXXD2

L12 ANSWER 5 OF 45 CAPLUS COPYRIGHT 2002 ACS
 TI Novel method for inducing the differentiation of embryonic stem cells into ectodermal cells and its use
 SO PCT Int. Appl., 138 pp.
 CODEN: PIXXD2

L12 ANSWER 6 OF 45 CAPLUS COPYRIGHT 2002 ACS
 TI Derivation of midbrain dopaminergic neurons from embryonic stem cells
 SO PCT Int. Appl., 66 pp.
 CODEN: PIXXD2

L12 ANSWER 7 OF 45 CAPLUS COPYRIGHT 2002 ACS
 TI Embryonic stem cells and neural progenitor cells derived therefrom
 SO PCT Int. Appl., 125 pp.
 CODEN: PIXXD2

L12 ANSWER 8 OF 45 MEDLINE DUPLICATE 2
 TI The ribosomal S6 kinases, cAMP-responsive element-binding, and STAT3 proteins are regulated by different leukemia inhibitory factor signaling pathways in mouse embryonic stem cells.
 SO JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Dec 7) 276 (49) 46204-11.
 Journal code: 2985121R. ISSN: 0021-9258.

L12 ANSWER 9 OF 45 CAPLUS COPYRIGHT 2002 ACS
 TI Forced expression of the Oct-4 gene influences differentiation of embryonic stem cells
 SO Chinese Science Bulletin (2001), 46(17), 1446-1449
 CODEN: CSBUEF; ISSN: 1001-6538

L12 ANSWER 10 OF 45 CAPLUS COPYRIGHT 2002 ACS
 TI Differentiation of embryonic stem cells to insulin-secreting structures similar to pancreatic islets
 SO Science (Washington, DC, United States) (2001), 292(5520), 1389-1394
 CODEN: SCIEAS; ISSN: 0036-8075

L12 ANSWER 11 OF 45 MEDLINE DUPLICATE 3
 TI The neurotrophic factors in non-neuronal tissues.
 SO CELLULAR AND MOLECULAR LIFE SCIENCES, (2001 Jul) 58 (8) 1061-6. Ref: 64
 Journal code: 9705402. ISSN: 1420-682X.

L12 ANSWER 12 OF 45 MEDLINE
 TI Neuronal differentiation of mouse embryonic stem cells: lineage selection and forced differentiation paradigms.
 SO BLOOD CELLS, MOLECULES, AND DISEASES, (2001 May-Jun) 27 (3) 705-12.
 Journal code: 9509932. ISSN: 1079-9796.

L12 ANSWER 13 OF 45 MEDLINE DUPLICATE 4
 TI Nestin-specific green fluorescent protein expression in embryonic stem cell-derived neural precursor cells used for transplantation.
 SO STEM CELLS, (2001) 19 (5) 419-24.
 Journal code: 9304532. ISSN: 1066-5099.

L12 ANSWER 14 OF 45 MEDLINE DUPLICATE 5
 TI Enrichment of neurons and neural precursors from human embryonic stem cells.
 SO EXPERIMENTAL NEUROLOGY, (2001 Dec) 172 (2) 383-97.
 Journal code: 0370712. ISSN: 0014-4886.

L12 ANSWER 15 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

TI Organization of neural lineage cells in embryoid bodies derived from

murine embryonic stem (ES) cells.

SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 347. print.

Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San

Diego, California, USA November 10-15, 2001

ISSN: 0190-5295.

L12 ANSWER 16 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

TI Mechanisms of neuronal development from embryonic stem cells.

SO Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 346. print.

Meeting Info.: 31st Annual Meeting of the Society for Neuroscience San

Diego, California, USA November 10-15, 2001

ISSN: 0190-5295.

L12 ANSWER 17 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC. DUPLICATE

6

TI The regulation of embryonic stem cell differentiation by leukaemia inhibitory factor (LIF).

SO Differentiation, (October, 2001) Vol. 68, No. 4-5, pp. 227-234. print.

ISSN: 0301-4681.

L12 ANSWER 18 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

TI Characterization of embryonic stem (ES) cells as potential source of retinal progenitors.

SO IOVS, (March 15, 2001) Vol. 42, No. 4, pp. S198. print.

Meeting Info.: Annual Meeting of the Association for Research in Vision and Ophthalmology Fort Lauderdale, Florida, USA April 29-May 04, 2001

L12 ANSWER 19 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC. DUPLICATE

7

TI Effect of brain-derived neurotrophic factor on neural differentiation of

mouse embryonic stem cells and neural precursor cells.

SO Neuroscience Research Communications, (November December, 2001) Vol. 29,

No. 3, pp. 183-192. print.

ISSN: 0893-6609.

L12 ANSWER 20 OF 45 CAPLUS COPYRIGHT 2002 ACS

TI Differentiation of embryonic stem cell -derived dopaminergic neurons is enhanced by survival-promoting factors

SO Mechanisms of Development (2001), 105(1-2), 93-104
CODEN: MEDVE6; ISSN: 0925-4773

L12 ANSWER 21 OF 45 MEDLINE DUPLICATE 8

TI Direct neural fate specification from embryonic stem cells: a primitive mammalian neural stem cell stage acquired through a default mechanism.

SO NEURON, (2001 Apr) 30 (1) 65-78.

Journal code: 8809320. ISSN: 0896-6273.

L12 ANSWER 22 OF 45 MEDLINE DUPLICATE 9

TI Differentiation of green fluorescent protein-labeled embryonic stem cell-derived neural precursor cells into Thy-1-positive neurons and glia after transplantation into adult rat striatum.

SO JOURNAL OF NEUROSURGERY, (2000 Dec) 93 (6) 1026-32.
Journal code: 0253357. ISSN: 0022-3085.

L12 ANSWER 23 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

TI A novel in vitro assay for teratogen screening using embryonic stem cells.

SO Reproductive Toxicology, (November December, 2000) Vol. 14, No. 6, pp.

565. print.

Meeting Info.: 28th Conference of European Teratology Society Ferrara,

Italy September 11-14, 2000 European Teratology Society

ISSN: 0890-6238.

L12 ANSWER 24 OF 45 MEDLINE DUPLICATE 10

TI Differentiation of rat striatal embryonic stem cells in vitro: monolayer culture vs. three-dimensional coculture with differentiated brain cells.

SO JOURNAL OF NEUROSCIENCE RESEARCH, (2000 Feb 15) 59 (4) 504-12.

Journal code: 7600111. ISSN: 0360-4012.

L12 ANSWER 25 OF 45 MEDLINE DUPLICATE 11

TI The ciliary neurotrophic factor and its receptor, CNTFR alpha.

SO PHARMACEUTICA ACTA HELVETIAE, (2000 Mar) 74 (2-3) 265-72. Ref: 61

Journal code: 0401134. ISSN: 0031-6865.

L12 ANSWER 26 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

TI Positional specification of in vitro generated, ESEs cell-derived neural progenitors.

SO Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp. Abstract

No.-23.2. print.

Meeting Info.: 30th Annual Meeting of the Society of Neuroscience New

Orleans, LA, USA November 04-09, 2000 Society for Neuroscience

ISSN: 0190-5295.

L12 ANSWER 27 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

TI Conservation of regulated neural gene expression in a human pluripotent stem cell line.

SO Society for Neuroscience Abstracts., (1999) Vol. 25, No. 1-2, pp. 2290.

Meeting Info.: 29th Annual Meeting of the Society for Neuroscience. Miami

Beach, Florida, USA October 23-28, 1999 Society for Neuroscience

ISSN: 0190-5295.

L12 ANSWER 28 OF 45 CAPLUS COPYRIGHT 2002 ACS

TI Neurons derived in vitro from ES cells express homeoproteins characteristic of motoneurons and interneurons

SO Mechanisms of Development (1998), 79(1,2), 185-198
CODEN: MEDVE6; ISSN: 0925-4773

L12 ANSWER 29 OF 45 MEDLINE DUPLICATE 12

TI Leukemia inhibitory factor in human reproduction.

SO AMERICAN JOURNAL OF REPRODUCTIVE IMMUNOLOGY, (1998 Feb) 39 (2) 144-51.

Ref: 94

Journal code: 8912860. ISSN: 1046-7408.

L12 ANSWER 30 OF 45 MEDLINE DUPLICATE 13

TI Blastula-stage stem cells can differentiate into dopaminergic and serotonergic neurons after transplantation.

SO EXPERIMENTAL NEUROLOGY, (1998 Jan) 149 (1) 28-41.
Journal code: 0370712. ISSN: 0014-4886.

L12 ANSWER 31 OF 45 MEDLINE DUPLICATE 14
TI Retinoic acid mediates Pax6 expression during in vitro differentiation of embryonic stem cells.
SO DIFFERENTIATION, (1997 Dec) 62 (4) 187-92.
Journal code: 0401650. ISSN: 0301-4681.

L12 ANSWER 32 OF 45 CAPLUS COPYRIGHT 2002 ACS
TI Targeted deletion in astrocyte intermediate filament (Gfap) alters neuronal physiology
SO Proceedings of the National Academy of Sciences of the United States of America (1996), 93(13), 6361-6366
CODEN: PNASA6; ISSN: 0027-8424

L12 ANSWER 33 OF 45 MEDLINE DUPLICATE 15
TI Cardiotrophin-1 displays early expression in the murine heart tube and promotes cardiac myocyte survival.
SO DEVELOPMENT, (1996 Feb) 122 (2) 419-28.
Journal code: 8701744. ISSN: 0950-1991.

L12 ANSWER 34 OF 45 CAPLUS COPYRIGHT 2002 ACS
TI Development of neuronal precursor cells and functional postmitotic neurons from embryonic stem cells in vitro
SO Mechanisms of Development (1996), 59(1), 89-102
CODEN: MEDVE6; ISSN: 0925-4773

L12 ANSWER 35 OF 45 MEDLINE
TI Cardiotrophin-1: a multifunctional cytokine that signals via LIF receptor-gp 130 dependent pathways.
SO CYTOKINE AND GROWTH FACTOR REVIEWS, (1996 Jun) 7 (1) 81-91. Ref: 63
Journal code: 9612306. ISSN: 1359-6101.

L12 ANSWER 36 OF 45 MEDLINE DUPLICATE 16
TI Cardiotrophin-1. Biological activities and binding to the leukemia inhibitory factor receptor/gp130 signaling complex.
SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1995 May 5) 270 (18) 10915-22.
Journal code: 2985121R. ISSN: 0021-9258.

L12 ANSWER 37 OF 45 MEDLINE DUPLICATE 17
TI In vitro differentiation of embryonic stem cells into glial cells and functional neurons.
SO JOURNAL OF CELL SCIENCE, (1995 Oct) 108 (Pt 10) 3181-8.
Journal code: 0052457. ISSN: 0021-9533.

L12 ANSWER 38 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Embryonic stem cells transplanted to the adult brain: Tyrosine hydroxylase (TH) positive neurons developed spontaneously and by transfection with human TH gene.
SO Society for Neuroscience Abstracts, (1995) Vol. 21, No. 1-3, pp. 2028.
Meeting Info.: 25th Annual Meeting of the Society for Neuroscience San Diego, California, USA November 11-16, 1995
ISSN: 0190-5295.

L12 ANSWER 39 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI ES-like cell cultures derived from early zebrafish embryos.
SO Molecular Marine Biology and Biotechnology, (1995) Vol. 4, No. 3, pp. 193-199.
ISSN: 1053-6426.

L12 ANSWER 40 OF 45 MEDLINE DUPLICATE 18
TI Ciliary neurotrophic factor maintains the pluripotentiality of embryonic stem cells.
SO DEVELOPMENT, (1993 Nov) 119 (3) 559-65.
Journal code: 8701744. ISSN: 0950-1991.

L12 ANSWER 41 OF 45 MEDLINE
TI Leukemia inhibitory factor (LIF): a growth factor with pleiotropic effects on bone biology.
SO PROGRESS IN GROWTH FACTOR RESEARCH, (1992) 4 (4) 337-53. Ref: 138
Journal code: 8912757. ISSN: 0955-2235.

L12 ANSWER 42 OF 45 MEDLINE
TI Distribution and binding properties of receptors for leukaemia inhibitory factor.
SO CIBA FOUNDATION SYMPOSIUM, (1992) 167 227-39; discussion 239-44. Ref: 19
Journal code: 0356636. ISSN: 0300-5208.

L12 ANSWER 43 OF 45 MEDLINE
TI The leukemia inhibitory factor (LIF).
SO INTERNATIONAL JOURNAL OF CELL CLONING, (1991 Mar) 9 (2) 95-108. Ref: 52
Journal code: 8308172. ISSN: 0737-1454.

L12 ANSWER 44 OF 45 CAPLUS COPYRIGHT 2002 ACS
TI New development of studies on nerve differentiation factors
SO Jikken Igaku (1990), 8(12), 1582-7
CODEN: JIIGEF; ISSN: 0288-5514

L12 ANSWER 45 OF 45 MEDLINE DUPLICATE 19
TI The cholinergic neuronal differentiation factor from heart cells is identical to leukemia inhibitory factor.
SO SCIENCE, (1989 Dec 15) 246 (4936) 1412-6.
Journal code: 0404511. ISSN: 0036-8075.

=> d ibib ab 43,40,37,34,17

L12 ANSWER 43 OF 45 MEDLINE
ACCESSION NUMBER: 91245208 MEDLINE
DOCUMENT NUMBER: 91245208 PubMed ID: 1645391
TITLE: The leukemia inhibitory factor (LIF).
AUTHOR: Metcalf D
CORPORATE SOURCE: Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia.
SOURCE: INTERNATIONAL JOURNAL OF CELL CLONING, (1991 Mar) 9 (2) 95-108. Ref: 52
Journal code: 8308172. ISSN: 0737-1454.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) General Review; (REVIEW) (REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199107
ENTRY DATE: Entered STN: 19910719
Last Updated on STN: 19910719
Entered Medline: 19910701
AB Leukemia inhibitory factor (LIF) is a glycoprotein able to enforce differentiation and/or suppress clonogenic self-renewal in a number of myeloid leukemic cell lines. When acting on normal embryonic stem cells, it has the opposite action of preventing differentiation commitment. LIF is not a proliferative factor when acting alone on normal hemopoietic cells, but can potentiate the action of interleukin 3 on blast cell and megakaryocyte precursors. When injected in vivo, LIF stimulates rises in megakaryocyte numbers and platelet levels. LIF also exhibits striking functional

effects

on a wide range of other cells including hepatic parenchymal cells, **neurons**, adipocytes, osteoblasts and gonadal cells. The polyfunctionality of LIF suggests strongly that it is normally intended to

be produced locally and act as a local regulator. Despite its wide range of actions, LIF remains a promising candidate for clinical use in thrombocytopenia and myeloid leukemia.

L12 ANSWER 40 OF 45 MEDLINE DUPLICATE 18

ACCESSION NUMBER: 94244460 MEDLINE

DOCUMENT NUMBER: 94244460 PubMed ID: 8187629

TITLE: Ciliary neurotrophic factor maintains the pluripotentiality

of embryonic stem cells.

AUTHOR: Conover J C; Ip N Y; Poueymirou W T; Bates B; Goldfarb M P;

DeChiara T M; Yancopoulos G D

CORPORATE SOURCE: Regeneron Pharmaceuticals, Inc., Tarrytown, New York 10591.

SOURCE: DEVELOPMENT, (1993 Nov) 119 (3) 559-65.

Journal code: 8701744. ISSN: 0950-1991.

PUB. COUNTRY: ENGLAND: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199406

ENTRY DATE: Entered STN: 19940629

Last Updated on STN: 20000303

Entered Medline: 19940620

AB Ciliary neurotrophic factor was discovered based on its ability to support

the survival of ciliary **neurons**, and is now known to act on a variety of **neuronal** and glial populations. Two distant relatives of ciliary neurotrophic factor, **leukemia inhibitory factor** and oncostatin M, mimic ciliary neurotrophic factor with respect to its actions on cells of the nervous system. In contrast to ciliary neurotrophic factor, **leukemia inhibitory factor** and oncostatin M also display a broad array of actions on cells outside of the nervous system. The overlapping activities of **leukemia inhibitory factor**, oncostatin M and ciliary neurotrophic factor can be attributed to shared receptor components. The specificity of ciliary neurotrophic factor for cells of the nervous system results from the restricted expression of the alpha component of the ciliary neurotrophic factor receptor complex, which

is

required to convert a functional **leukemia inhibitory factor**/oncostatin M receptor complex into a ciliary neurotrophic factor receptor complex. The recent observation that the alpha component

of the ciliary neurotrophic factor receptor complex is expressed by very

early **neuronal** precursors suggested that ciliary neurotrophic factor may act on even earlier precursors, particularly on cells previously thought to be targets for **leukemia inhibitory factor** action. Here we show the first example of ciliary neurotrophic factor responsiveness in cells residing outside of the nervous system by demonstrating that **embryonic stem cells** express a functional ciliary neurotrophic factor receptor complex, and that ciliary neurotrophic factor is similar to **leukemia inhibitory factor** in its ability to maintain the pluripotentiality of these cells.

L12 ANSWER 37 OF 45 MEDLINE DUPLICATE 17

ACCESSION NUMBER: 96019252 MEDLINE

DOCUMENT NUMBER: 96019252 PubMed ID: 7593279

TITLE: In vitro differentiation of **embryonic stem cells** into glial cells and functional **neurons**.

AUTHOR: Fraichard A; Chassande O; Bilbaut G; Dehay C; Savatier P;

Samarut J

CORPORATE SOURCE: Laboratoire de Biologie Moleculaire et

Cellulaire de l'ENS,

UMR 49 CNRS, Ecole Normale Supérieure de Lyon,

France.

SOURCE: JOURNAL OF CELL SCIENCE, (1995 Oct) 108 (Pt 10) 3181-8.

Journal code: 0052457. ISSN: 0021-9533.

PUB. COUNTRY: ENGLAND: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199512

ENTRY DATE: Entered STN: 19960124

Last Updated on STN: 19960124

Entered Medline: 19951218

AB Mouse **embryonic stem cells** were induced to

differentiate in culture with retinoic acid. Putative precursors of **neurons** and glial cells (**nestin**-positive cells) were clearly identified as early as three days after the onset of differentiation. At day 6, **neuron**-like cells could be clearly identified, either as isolated cells or as cellular networks. Some of these cells were positive for astrocyte- or oligodendrocyte-specific antigens (GFAP or O4 antigens, respectively). Other cells were positive

for **neuron**-specific antigens (cytoskeleton proteins MAP2, MAP5 and NF200, as well as synaptophysin). Some **neuronal**-like cells were also positive for acetylcholinesterase activity or glutamic acid decarboxylase expression, indicating that ES cells could differentiate into GABAergic and possibly cholinergic **neurons**.

Electrophysiological analyses performed in voltage clamp conditions showed

that cell membranes contained voltage-dependent channels.

Overshooting

action potentials could be triggered by current injection. Taken together,

these data provide evidence that **embryonic stem cells** can differentiate first into **neuron**-glia progenitors, and later into glial cells and functional **neurons**, in vitro. This technique provides an unique system to study early steps of **neuronal** differentiation in vitro.

L12 ANSWER 34 OF 45 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:552305 CAPLUS

DOCUMENT NUMBER: 125:271621

TITLE: Development of **neuronal** precursor cells and functional postmitotic **neurons** from **embryonic stem cells** in vitro

AUTHOR(S): Okabe, Shigeo; Forsberg-Nilsson, Karin; Spiro, A.

Cyril; Segal, Menahem; McKay, Ronald D. G.

CORPORATE SOURCE: Laboratory of Molecular Biology, National Institute of

Neurological Disorders and Stroke, National Institutes of Health, Bethesda, 20892 MD, USA

SOURCE: Mechanisms of Development (1996), 59(1), 89-102

CODEN: MEDVE6; ISSN: 0925-4773

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

LANGUAGE: English

AB To understand the mechanism of the sequential restriction of multipotency

of stem cells during development, we have established culture conditions

that allow the differentiation of neuroepithelial precursor cells from **embryonic stem (ES)** cells. A highly enriched population of neuroepithelial precursor cells derived from ES cells proliferates in the

presence of basic fibroblast growth factor (bFGF). These cells differentiate into both **neurons** and glia following withdrawal of bFGF. By further differentiating the cells in serum-contg. medium, the

neurons express a wide variety of **neuron**-specific genes

and generate both excitatory and inhibitory synaptic connections.
The expression pattern of position-specific neural markers suggests the presence of a variety of central nervous system (CNS) neuronal cell types. These findings indicate that neuronal precursor cells can be isolated from ES cells and that these cells can efficiently differentiate into functional post-mitotic neurons of diverse CNS structures.

L12 ANSWER 17 OF 45 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE

6
ACCESSION NUMBER: 2001:557742 BIOSIS
DOCUMENT NUMBER: PREV200100557742
TITLE: The regulation of embryonic stem cell differentiation by leukaemia inhibitory factor (LIF).
AUTHOR(S): Murray, Patricia; Edgar, David (1)
CORPORATE SOURCE: (1) Department of Human Anatomy and Cell Biology,
University of Liverpool, Ashton Street, Liverpool, L69
3GE: dhedgar@liv.ac.uk UK
SOURCE: Differentiation, (October, 2001) Vol. 68, No. 4-5, pp. 227-234. print.
ISSN: 0301-4681.

DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB LIF (leukaemia inhibitory factor) is commonly used to maintain mouse embryonic stem cells in an undifferentiated state. These cells spontaneously differentiate when allowed to aggregate in the absence of LIF, forming embryoid bodies in which early embryonic cell lineages develop. Using embryoid bodies cultured in the presence and absence of LIF, we show that although LIF inhibited the development of visceral and parietal endodermal cells, it did not affect the differentiation of the primitive endodermal cell precursors of these extraembryonic cell lineages. Furthermore, deposition of the basement membrane produced by the primitive endodermal cells, which separates them from the remaining cells of the embryoid body, still occurred. The differentiation of primitive ectodermal cells and their progeny was inhibited by LIF, as evidenced by the lack of expression of FGF-5, muscle, and neuronal markers. However, cavitation of the embryoid body and maintenance of the cells in contact with the primitive endodermal basement membrane as an epiblast epithelium still occurred normally in the presence of LIF. These results indicate that cavitation and formation of the epiblast epithelium are regulated by mechanisms distinct from those controlling the differentiation of epiblast cell lineages. Furthermore, although epithelium formation and cavitation do not require the differentiation of visceral endodermal cells, the results are consistent with the hypothesis that the primitive endodermal basement membrane is sufficient to induce the epithelialization of undifferentiated embryonic stem cells necessary for cavitation.

=> d his

(FILE 'HOME' ENTERED AT 13:31:41 ON 12 AUG 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 13:31:52 ON 12 AUG 2002
L1 8688 S EMBRYONIC STEM CELL

L2 731034 S NEURON?
L3 733 S L1 AND L2
L4 56250 S SERUM FREE OR (WITHOUT(3A)SERUM) OR (MINUS(3A)SERUM)
L5 13 S L3 AND L4
L6 9 DUP REM L5 (4 DUPLICATES REMOVED)
L7 14822 S DEFIN? MEDIA OR DEFIN? MEDIUM
L8 12 S L3 AND L7
L9 6 DUP REM L8 (6 DUPLICATES REMOVED)
L10 7583 S EMX2 OR HOXB1 OR LEUKEMIA INHIBITORY FACTOR OR NESTIN
L11 76 S L3 AND L10
L12 45 DUP REM L11 (31 DUPLICATES REMOVED)

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NEWS 6 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS 8 Apr 22 Federal Research in Progress (FEDRIP) now available
NEWS 9 Jun 03 New e-mail delivery for search results now available
NEWS 10 Jun 10 MEDLINE Reload
NEWS 11 Jun 10 PCTFULL has been reloaded
NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY
NEWS 15 Jul 30 NETFIRST to be removed from STN
NEWS 16 Aug 08 CANCERLIT reload
NEWS 17 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18 Aug 08 NTIS has been reloaded and enhanced
NEWS 19 Aug 09 JAPIO to be reloaded August 18, 2002

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L5 ANSWER 1 OF 3 MEDLINE DUPLICATE 1
 ACCESSION NUMBER: 2002229148 MEDLINE
 DOCUMENT NUMBER: 21964619 PubMed ID: 11967557
 TITLE: Neural induction, the default model and
 embryonic stem cells.
 AUTHOR: Munoz-Sanjuan Ignacio; Brivanlou Ali H
 CORPORATE SOURCE: Laboratory of Molecular Vertebrate
 Embryology, The
 Rockefeller University, New York, New York 10021, USA.
 SOURCE: Nat Rev Neurosci, (2002 Apr) 3 (4) 271-80. Ref: 111
 Journal code: 100962781. ISSN: 1471-0048.
 PUB. COUNTRY: England: United Kingdom
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
 General Review; (REVIEW)

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199407
ENTRY DATE: Entered STN: 19940714
Last Updated on STN: 19940714
Entered Medline: 19940706

AB We have examined the fates of the progeny of supernumerary embryonic stem cells (O/P teloblasts) generated by microinjecting polyadenylic acid into newborn O/P teloblasts in embryos of the leech, *Helobdella triserialis*. In normal development, each O/P teloblast generates a rostrocaudal column of daughter cells (primary blast cells) that contribute distinct segmentally iterated O or P sets of epidermal and neural progeny to the mature leech. Previous results suggest that primary blast cells derived from ipsilateral pairs of O/P teloblasts are equipotent and equivalent at birth; that they and their progeny assume distinct O or P fates according to hierarchical and position-dependent interactions; and that the P fate is the primary, or default, fate and the O fate is the secondary fate. In the work presented here, one O/P teloblast was experimentally induced to undergo a supernumerary equal division, and the developmental fates of the progeny of the three (two "duplicate" and one "nonduplicate") ipsilateral O/P teloblasts were determined at stages 8 and 10. We find that some supernumerary O/P teloblasts produce supernumerary P progeny, whereas others generate supernumerary O progeny. When three O/P-derived bandlets are present, bandlets derived from the duplicate O/P teloblasts give rise to progeny of the same (O or P) fate. When the nonduplicate bandlet is absent, the duplicate bandlets assume distinct O and P fates. These results suggest that ipsilateral sister O/P teloblasts, while equipotent, might not be equivalent.

=> D HIS

(FILE 'HOME' ENTERED AT 09:58:08 ON 15 AUG 2002)

FILE 'MEDLINE, BIOSIS, CAPLUS' ENTERED AT 09:58:15 ON 15 AUG 2002

L1 8704 S EMBRYONIC STEM CELL
L2 4074 S DEFAULT
L3 1344202 S NEURON OR NEURONAL OR NEURAL OR NESTIN
L4 8 S L1(P)L2(P)L3
L5 3 DUP REM L4 (5 DUPLICATES REMOVED)

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NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS 8 Apr 22 Federal Research in Progress (FEDRIP) now available
NEWS 9 Jun 03 New e-mail delivery for search results now available
NEWS 10 Jun 10 MEDLINE Reload
NEWS 11 Jun 10 PCTFULL has been reloaded
NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002; saved answer sets no longer valid
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NEWS 18 Aug 08 NTIS has been reloaded and enhanced
NEWS 19 Aug 09 JAPIO to be reloaded August 18, 2002

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AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002

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L1 5 HOXB1 AND EMX2

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PROCESSING COMPLETED FOR L1
L2 3 DUP REM L1 (2 DUPLICATES REMOVED)

=> d ti so 1-3

L2 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Primitive neural stem cells and method for differentiation of stem
cells
to neural cells
SO PCT Int. Appl., 84 pp.
CODEN: PIXXD2

L2 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
TI Neural stem cell lineages are regionally specified, but not
committed,
within distinct compartments of the developing brain
SO Development (Cambridge, United Kingdom) (2002), 129(1), 233-
244
CODEN: DEVPED; ISSN: 0950-1991

L2 ANSWER 3 OF 3 MEDLINE DUPLICATE 1
TI Mechanism of hyperthermia effects on CNS development: rostral
gene
expression domains remain, despite severe head truncation; and the
hindbrain/otocyst relationship is altered.
SO TERATOLOGY, (1999 Mar) 59 (3) 139-47.
Journal code: 0153257. ISSN: 0040-3709.

=> d ibib ab 1,2

L2 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:256435 CAPLUS
DOCUMENT NUMBER: 136:275702
TITLE: Primitive neural stem cells and method for
differentiation of stem cells to neural cells
INVENTOR(S): Van der Kooy, Derek; Tropepe, Vincent
PATENT ASSIGNEE(S): Can.
SOURCE: PCT Int. Appl., 84 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002026941	A2	20020404	WO 2001-CA1383	
20010928				
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT,			

BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
TG
PRIORITY APPLN. INFO.: US 2000-236394P P 20000929
AB Described are a novel cell type in the neural lineage, and method of
producing the same based on the degree of neural commitment and
growth
factor responsiveness in vitro and the potential to give rise to neural
and non-neural progeny in vivo. The novel cell type of neural
lineage and
cells derived therefrom have a no. of applications including
applications
regarding tissue engineering, transplantation and gene therapy and
drug
discovery. Also described are suggested uses of the method and cell
type
including isolating genes that pos. and neg. regulate the transition
from
an ES cell to a neural cell and generally for studying ES cell models
of
mammalian neural development.

L2 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:88224 CAPLUS
DOCUMENT NUMBER: 136:276499
TITLE: Neural stem cell lineages are regionally specified,
but not committed, within distinct compartments of the
developing brain
AUTHOR(S): Hitoshi, Seiji; Tropepe, Vincent; Ekker, Marc;
Van der
Kooy, Derek
CORPORATE SOURCE: Department of Anatomy and Cell
Biology, University of
Toronto, Toronto, ON, M5S 1A8, Can.
SOURCE: Development (Cambridge, United Kingdom)
(2002),
129(1), 233-244
CODEN: DEVPED; ISSN: 0950-1991

PUBLISHER: Company of Biologists Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Regional patterning in the developing mammalian brain is partially
regulated by restricted gene expression patterns within the germinal
zone,
which is composed of stem cells and their progenitor cell progeny.
Whether or not neural stem cells, which are considered at the top of
the
neural lineage hierarchy, are regionally specified remains unknown.
Here
the authors show that the cardinal properties of neural stem cells
(self-renewal and multipotentiality) are conserved among embryonic
cortex,
ganglionic eminence and midbrain/hindbrain, but that these different
stem
cells express sep. mol. markers of regional identity in vitro, even after
passaging. Neural stem cell progeny derived from ganglionic
eminence but
not from other regions are specified to respond to local environmental
cues to migrate ventrolaterally, when initially deposited on the
germinal
layer of ganglionic eminence in organotypic slice cultures. Cues
exclusively from the ventral forebrain in a 5 day co-culture paradigm
could induce both early onset and late onset marker gene expression
of
regional identity in neural stem cell colonies derived from both the
dorsal and ventral forebrain as well as from the midbrain/hindbrain.
Thus, neural stem cells and their progeny are regionally specified in
the
developing brain, but this regional identity can be altered by local
inductive cues.
REFERENCE COUNT: 48 THERE ARE 48 CITED
REFERENCES AVAILABLE FOR THIS

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L3 8707 EMBRYONIC STEM CELL

=> s emx2

L4 226 EMX2

=> s hoxb1

L5 239 HOXB1

=> s l3 and l4

L6 1 L3 AND L4

=> s l3 and l5

L7 1 L3 AND L5

=> d ti so

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TI An analysis of retinoic acid-induced gene expression and
metabolism in AB1

embryonic stem cells

SO Journal of Biological Chemistry (1996), 271(25), 14971-14980

CODEN: JBCHA3; ISSN: 0021-9258

=> d ti so l6

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TI Positional specification of in vitro generated, ESEs cell-derived
neural

progenitors.

SO Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp.
Abstract

No.-23.2. print.

Meeting Info.: 30th Annual Meeting of the Society of Neuroscience
New

Orleans, LA, USA November 04-09, 2000 Society for Neuroscience
. ISSN: 0190-5295.

=> d his

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L1 5 S HOXB1 AND EMX2

L2 3 DUP REM L1 (2 DUPLICATES REMOVED)

L3 8707 S EMBRYONIC STEM CELL

L4 226 S EMX2

L5 239 S HOXB1

L6 1 S L3 AND L4

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